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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/694,719 | 10/29/2003 | Yoshiyuki Takata | Q78208 | 4022 |

23373 7590 03/23/2005

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

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| EXAMINER |
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LEE, SIN J

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| ART UNIT | PAPER NUMBER |
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1752

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,719

Applicant(s)

TAKATA ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

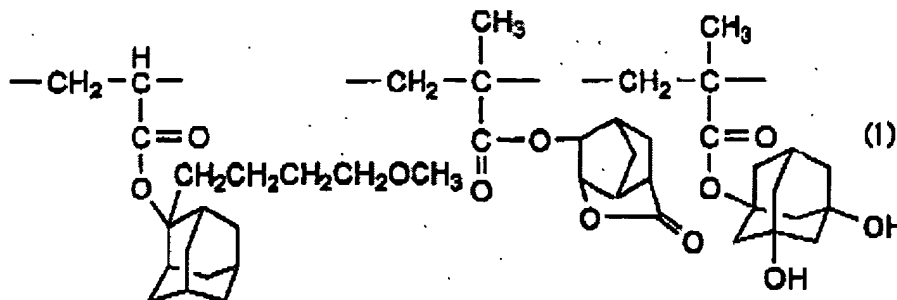
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato (EP 1 338 922 A2).

In Example 1 (see Table 2 in [0120]), Sato teaches a positive resist composition containing Resin (1), photoacid generators (PAG 4-48/PAG4-6), a basic compound, a surfactant, and a solvent. Sato's Resin (1) has the following formula (see [0119]);



In this resin, the first repeating unit (2-methoxybutyl-2-adamantyl acrylate unit) is present in the amount of 40 mol % (see Synthesis Example 1 in [0116]-[0117]), and the repeating unit teaches present formula (I). The second repeating unit in the resin teaches present formula (IIa) of claim 4. Therefore, the prior art teaches present inventions of claims 1-4 and 9.

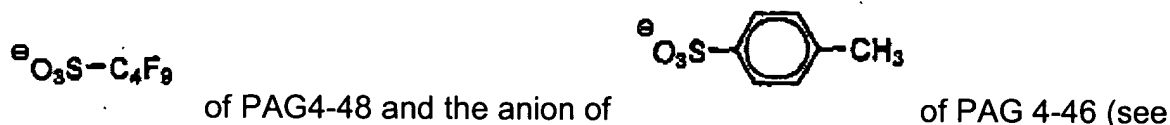
With respect to present claim 5, Sato teaches (see [0073]) that his resin can have additional copolymerizable monomer units and he discloses maleic anhydride as one of the examples for such monomer units. Based on this teaching, one of ordinary skill in the art would immediately envisage Sato's Resin (1) to have maleic anhydride as the additional monomer unit. Therefore, the prior art teaches present invention of claim 5.

With respect to present claim 6, Sato's photoacid generator, PAG 4-48 has the following structure (see pg.48)



and thus teaches the present acid generator of the formula (IIIa). Therefore, the prior art teaches present invention of claim 6.

With respect to present claim 7, Sato teaches the equivalence of the anion of



pg.48). Based on Sato's teaching, one of ordinary skill in the art would immediately

envisage using the anion of [O-]S(=O)(=O)C1=CC=C(C=C1)C for PAG 4-48. Therefore, the prior art teaches the present invention of claim 7.

With respect to present claim 8, in his Example 1 (see Table 2), Sato uses 2 g of Resin (1) and total of 75 mg (= 0.075 g) of photoacid generators, which gives 96.4 wt. %

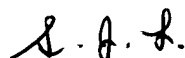
of the resin and 3.6 wt.% of the photoacid generators. Therefore, the prior art teaches present invention of claim 8.

With respect to present claim 10, in his Example 1 (see Table 2), Sato uses 2 g of Resin (1) and 4 mg (= 0.004 g) of the basic compound, which gives 0.2 part by weight per 100 parts by weight of the resin. Therefore, the prior art teaches present invention of claim 10.

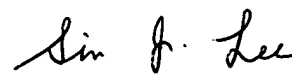
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
March 16, 2005



Sin J. Lee
Patent Examiner
Technology Center
1700